

CLAIMS

What is claimed is:

- 1 1. A method of executing a sequence of instructions comprising:
 - 2 determining a predicted predicate value for a predicate;
 - 3 and
 - 4 conditionally executing a predicated instruction depending on the
 - 5 predicted predicate value.
- 1 2. The method of claim 1, further comprising:
 - 2 executing a COMPARE instruction to determine an actual predicate value
 - 3 for the predicate;
 - 4 comparing the actual predicate value to the predicted predicate value; and
 - 5 flushing a pipeline if the predicted predicate value and the actual
 - 6 predicate value are unequal.
- 1 3. The method of claim 2, further comprising executing the predicated
 - 2 instruction after flushing the pipeline.
- 1 4. The method of claim 2, wherein flushing the pipeline consists of flushing only
 - 2 a backend portion of the pipeline.

6 conditionally execute a predicated instruction depending on the
7 predicted predicate value.

1 16. The processor of claim 15, further comprising a predicate prediction
2 calculator to calculate the predicted predicate value.

1 17. The processor of claim 15, further comprising a speculative predicate register
2 file to store the predicted predicate value.

1 18. The processor of claim 15, wherein the pipeline includes an actual predicate
2 value output coupled to the predicate table to provide an actual predicate
3 value to the predicate table.

1 19. The processor of claim 18, wherein the pipeline includes a flush input to
2 receive a flush signal if the predicted predicate value and the actual predicate
3 value are unequal.

1 20. The processor of claim 15, wherein the predicate table is to further store
2 historical information corresponding to a plurality of predicates.